



Ginsenoside Rb2 Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Ginsenoside Rb2

Catalog No.: CFN99965

Cas No.: 11021-13-9

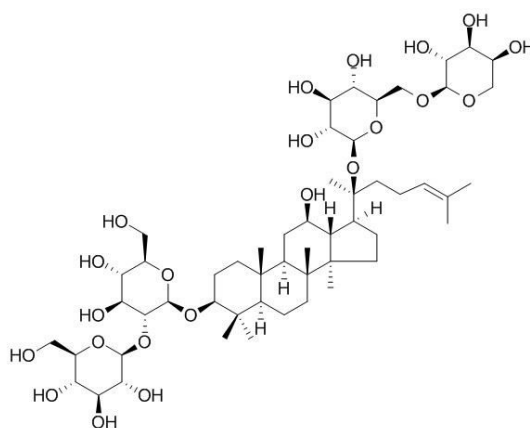
Purity: > 98%

M.F: C₅₃H₉₀O₂₂

M.W: 1079.27

Physical Description: White powder

Synonyms: (3 β , 12 β)-20-[(6-O- α -L-Arabinopyranosyl- β -D-glucopyranosyl)oxy]-12-hydroxy dammar-24-en-3-yl 2-O- β -D-glucopyranosyl- β -D-glucopyranoside.



[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food and cosmetic research;
4. Synthetic precursor compounds;
5. Intermediates & Fine Chemicals;
6. Ingredient in supplements, beverages;
7. Others.

[Source]

The root and rhizome of *Panax ginseng* C. A. Mey.

[Biological Activity or Inhibitors]

Ginsenosides, which are active compounds found in ginseng (*Panax ginseng*), are used as antidiabetic treatments; ginsenoside Rb2 may inhibit palmitate-induced gluconeogenesis via AMPK-induced SHP by relieving ER stress, a cause of gluconeogenesis.^[1]

Ginsenoside Rb2 is an inducer of the SOD1 gene, the SOD1 gene is greatly activated by ginsenoside Rb2 through transcription factor AP2 binding sites and its induction.^[2]

The intra-tumoral or oral administration of ginsenoside-Rb2 causes a marked inhibition of both neovascularization and tumor growth, the inhibition of tumor-associated angiogenesis by ginsenoside-Rb2 may partly contribute to the inhibition of lung tumor metastasis.^[3]

Ginsenoside-Rb2 has hypoglycemic activity in streptozotocin-diabetic rat, one of the mechanisms probably is the changes of glucokinase and glucose-6-phosphatase levels.

Ginsenoside-Rb2 has anti-oxidant activity, has hydroxyl radical scavenging activity changes by heat processing.^[4]

Ginsenoside Rb2 can enhance the expression of the sterol regulated element binding protein (SREBP) mRNA whereas treatment with cholesterol and FBS led to a reduction in the abundance of this transcript, suggests that it might be a valuable component capable of lowering the levels of lipids.^[5]

Ginsenoside-Rb2 is the most effective among ginsenosides from red ginseng to prevent the lethal infection of HVJ, so that this ginsenoside is a promising candidate as a mucosal immunoadjuvant to enhance antiviral activity.^[6]

[Solvent]

Pyridine, DMSO, Ethanol, Methanol.

[HPLC Method]^[7]

Mobile phase: Acetonitrile-0.2% Phosphoric acid H₂O, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: 40 °C;

The wave length of determination: 203 nm.

[Storage]

2-8°C, Protected from air and light, refrigerate or freeze.

[References]

- [1] Lee K T, Jung T W, Lee H J, *et al. Arch. Pharm. Res.*, 2011, 34(7):1201-8.
- [2] Kim Y H, Park K H, Rho H M. *J. Biol. Chem.*, 1996, 271(40):24539-43.
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- Yokozawa T, Kobayashi T, Oura H, *et al. Chem. Pharm. Bull.*, 1985, 33(2):869-72.
- [4] Kang K S, Kim H Y, Baek S H, *et al. Biol. Pharm. Bull.*, 2007, 30(4):724-8.
- [5] Kim E J, Lee H I, Chung K J, *et al. Bmb. Rep.*, 2009, 42(4):194-9.
- [6] Yin S, Wu H, Xu F, *et al. Acta Acad. Med. Militaris Tertiae*, 2010, 32(7):658-60.
- [7] Yoo Y C, Lee J, Park S R, *et al. J. Ginseng Res.*, 2013, 37(1):80-6.

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